Website For Enhancing Communication Effectiveness of Speech Impaired Tamil Language People

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Abstract- *The project is designed to provide a speech therapy tool for people who stutter. Stuttering is a speech impediment which causes the sufferer to repeat syllables, words, and vowel sounds involuntarily during speech. People with this disorder might not be knowing their level of the problem. So in order to assess their own level of the problem this tool can be used. In this project the stuttered people reads the given passage. Based on the time consumed by the person, the audio will be stored in the database and based on file size of the audio, the report will be generate. This will be helpful for the stuttering disorder person to evaluate themselves and do further improvement in their speech.*

The aim is to develop a tool helpful in promoting self training and develop the fluency of speech among people who stutter. The stuttered person usually lack in reading skill also. So, this application developed as a self therapy tool will be change the level of their speech. The performance level of the user will be generated in report module.

I. INTRODUCTION

1.1 PROBLEM DEFINITION

People with speech disorder were struggling to speak day by day. Speech disorders refer to difficulties producing speech sounds or problems with voice quality. They might be characterized by an interruption in the flow or rhythm of speech, such as stuttering. It is a challenging task for speech disorders to communicate with others.

1.2 OVERVIEW OF THE PROJECT

Stuttering affects the fluency of speech. It begins during childhood and, in some cases, lasts throughout life. The disorder is characterized by disruptions in the production of speech sounds, also called "disfluencies." Most people produce brief disfluencies from time to time. For instance, some words are repeated and others are preceded by "um" or "uh." Disfluencies are not necessarily a problem; however, they can impede communication when a person produces too many of them.

In most cases, stuttering has an impact on at least some daily activities. The specific activities that a person finds challenging to perform vary across individuals. For some people, communication difficulties only happen during specific activities, for example, talking on the telephone or talking before large groups. For most others, however, communication difficulties occur across a number of activities at home, school, or work. Some people may limit their participation in certain activities. Such "participation restrictions" often occur because the person is concerned about how others might react to disfluent speech. Other people may try to hide their disfluent speech from others by rearranging the words in their sentence (circumlocution), pretending to forget what they wanted to say, or declining to speak. Other people may find that they are excluded from participating in certain activities because of stuttering. Clearly, the impact of stuttering on daily life can be affected by how the person and others react to the disorder.

Stuttered speech often includes repetitions of words or parts of words, as well as prolongations of speech sounds. These disfluencies occur more often in persons who stutter than they do in the general population. Some people who stutter appear very tense or "out of breath" when talking. Speech may become completely stopped or blocked. Blocked is when the mouth is positioned to say a sound, sometimes for several seconds, with little or no sound forthcoming. After some effort, the person may complete the word. Interjections such as "um" or "like" can occur, as well, particularly when they contain repeated ("u- um- um") or prolonged ("uuuum") speech sounds or when they are used intentionally to delay the initiation of a word the speaker expects to "get stuck on."
The aim is to develop a tool helpful in promoting self training and develop the fluency of speech among people who stutter. The stuttered person usually lack in reading skill also. So, this application developed as a self therapy tool will be change the level of their speech. The performance level of the user will be generated in report module.

II. SYSTEM ANALYSIS

2.1 EXISTING SYSTEM

In existing system, websites only contains information regarding stuttering disorder such as types, causes, diagnosis and other treatments.

DISADVANTAGES

- The stuttering disorder people will get inferiority complex by comparing others.
- Can cause a person to become fearful of human interaction and meeting new people.
- Causing considerable anxiety and low self confidence.
- The lack of interest will increase their unconfident level.

There is no self therapy tool for Tamil stuttering people. So, they get difficulty in pronouncing words while speaking and also lack in reading skill.

2.2 PROPOSED SYSTEM

The project is developed as self therapy website for stuttering disorder people through self training. By using this tool the stuttered people can evaluate themselves and they can reduce the severity of a stutter.

ADVANTAGES

- Providing flexibility to users in terms of where and when they can use this therapy.
- Improve fluency with self training.
- Providing time based self training to the users.
- Efficient access to the users.

III. MODULE DESCRIPTION

- Registration
- Login
- Speech therapy
- Report
- Feedback

3.1 Registration module

In registration the user will register their details such as, user name, gender, date of birth, mobile number, address, pin code, email id, and password, user should fill all the entries in registration form ,after fill these details click on the submit button. When the user submits their details it will be stored into the database with time and date of the registration. If the user wants to change their details then they can change the details also. The registered user details are used for the process of login. Registration is essential for all the users. Any new user will register and login to the website.

3.2 Login module

Login is essential for all the users. The user can login to access the speech therapy tool. This will be done by providing email id and password which they have registered previously, before register their details user cannot login to the speech therapy tool. If the user try to login without registration it will go to the registration page only. The login details are stored into the database. After process of login, the user can access the speech therapy tool effectively.

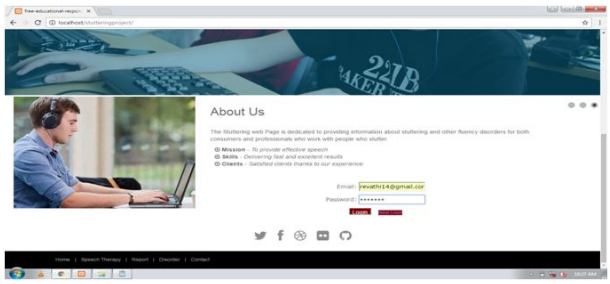

Figure 1.Login Page

3.3 Speech therapy tool module

In this module, after process of login speech therapy tool will be open. This tool will be help for the people who stutter. This is self training tool for the stuttering people; user can access this therapy independently. There are three level of stuttering such as mild, moderate and severe, any level of the stuttering person use this therapy. The user can record their voice by reading given passage at a time wav control of the user's voice displayed in this page, after reading user will be click on the update button, it will be stored into the database and show the confirmation message. The user can also download their recorded audio and play. User click on the report button it will display the message based on the comparing file size of the user and this message is helpful for the users continuously practice by themselves.

Figure 2.Speech Therapy

3.4 Report module

The report module shows how the user's fluency performance will be increased before and after utilizing this tool. When the user complete reading passage detail of the user will be stored in the database. In report generation it will compare the file size of the user and display the message with report. Based on the message the user will be practice continuously. This report includes the id, username, file size, and filename this will be generated in report module.

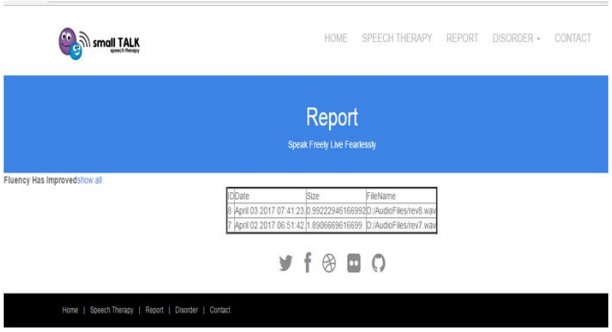

Figure 3.Report Page

3.5 Feedback Module

The feedback module issued to based on the user feedback reviews the speech therapy tool will be improved in future. Users can give their feedback about the speech therapy tool. User feedbacks are stored into the database.

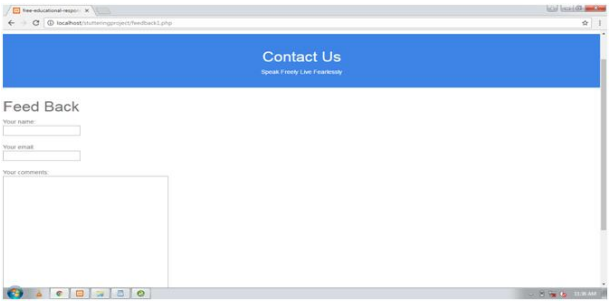

Figure 4. Feedback Page

IV. SYSTEM IMPLEMENTATION

Implementation is the process of installing the software into the system so that it will be provided with original data to process. Implementation phase is started after only the successful completion of the testing phase in which the above tests should be carried. System implementation is an activity that continues throughout the development phase. It is the process of bringing a developed system into the operational use.

The site was implemented using HTML web page, PHP, and MySQL. When the usertypes in the URL of the site in the address field of the browser, a Web Server is contacted to get the requested information. In the PHP Framework, Apache acts as the Web Server. The sole task of a Web Server is to accept in coming HTTP requests and to return the requested resource in an HTTP response. The first thing Apache does when a request comes in is to decide how to handle the request. Its decision is based upon the requested file's extension. While implementing, a database management system that stores all the properties and a file system. These are visible to users by generating a report.

V. CONCLUSION

This paper is done for the development of a website for stuttering disorders based on self therapy. The system provides a user friendly interface. The existing system does not have any such websites which promotes the self therapy tool for the stuttering disorder people. So, This tool to be developed. This tool can be used by any individuals. There is no restriction for the users. It can be used from anywhere and anytime

VI. FUTURE ENHANCEMENT

In future, the system will be more impressive and more sophisticate system to the user. The system has been designed in such a way that further enhancements can be made quite difficult. In speech disorder there are various types of disorders among them "stuttering" is the one which has been proposed now. So in future this can be enhanced for other different types of disorders which may be very helpful for them.

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